

Available online at www.sciencedirect.com



International Journal of Project Management

International Journal of Project Management xx (2019) xxx

www.elsevier.com/locate/ijproman

Governance of Projects: Generating value by linking projects with their permanent organisation

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Received 1 May 2018; received in revised form 5 January 2019; accepted 6 January 2019 Available online xxxx

Abstract

There exists little research into how value is effectively generated by temporary projects from the wider perspective of a permanent organisation. This paper investigates empirically how 'Governance of Projects' – the way in which a single, permanent organisation identifies, creates, and subsequently harvests value through multiple projects – occurs in four private-sector case companies. Data were collected from in-depth interviews with a wide range of employees and from internal operational documents. These data were codified and analysed as evidence of the types and intensity of links between organisational elements. The results illuminate the complex interplay of links that are imperative if the permanent organisation is to derive value from its projects, and shows that these links are context-dependent and vary between organisations. It is that the links exist, and not what the type of link is, that matters most. That these links extend beyond the project's execution is critical for maximising value. The paper demonstrates the advantages of adopting an organisational perspective in order to properly understand how Governance of Projects generates value within a permanent organisation. © 2019 Elsevier Ltd, APM and IPMA. All rights reserved.

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Keywords: Links; Temporary organisations; Permanent organisation; Governance of projects; Value generation

1. Introduction

The role played by projects in reaching corporate goals continues to expand and intensify (Lewis et al., 2002; Schoper et al., 2018). Accordingly, enterprises are developing new structures and processes for ensuring that projects and programmes generate a discernible value for the base organisation; in short, they are instituting what has been termed "Governance of Projects" (Müller and Lecoeuvre, 2014; Riis, 2013). However, little research has so far been carried out into the value generated by projects as seen from the wider perspective of a permanent organisation (Maniak et al., 2014). Almost without exception

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E-mail addresses: evri@sam.sdu.dk (E. Riis), mhellstr@abo.fi (M.M. Hellström), kim.wikstrom@abo.fi (K. Wikström). research has concerned itself with phenomena occurring during the operational lifespan of projects (Klakegg and Artto, 2008; Müller, 2011). Structures and processes are not studied as parts of a whole, but in 'balkanised' (Morris, 2011) isolation from one another. Few, if any, empirical studies have been carried out on Governance of Projects (GoP) holistically and there has been very little investigation of the elements – and the relationship between these elements – that must be combined in order to generate value effectively. Furthermore, the value generated after a project has formally ceased to exist has not received sufficient attention.

For a comprehensive and nuanced understanding of how projects generate value, these are serious omissions. Therefore, we undertook an empirical study of how projects generate value as seen from the perspective of the parent organisation. The principal interest of the study was with the structures and

https://doi.org/10.1016/j.ijproman.2019.01.005

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procedures developed for the value generation process as a whole and which are active throughout the whole value process. The study asked: how do organisations, both projectbased and project-supported, govern their projects with a view towards generating value, across the entire process of identifying value, to creating it, and finally harvesting it?

The particular focus of the paper is on the links between thetemporary organisations and parent organisations for value generation. The literature reviewed with the aim of conceptualising our research area stems primarily from the areas of project research, organisational studies and organisation theory. We also use literature on organisational emergence (Padgett and Powell, 2003, 2012) as a theoretical vantage point for exploring our topic. The rationale here is that one of the ways GoP can improve value creation and value capture is by establishing and nurturing links inside and between different domains within an organisation. Hence, we pose the following sub-questions: how do organisations establish links across domains in order to generate value from projects and how do these links manifest themselves as part of governance?

By answering these questions we aim to understand the value generation process and the principal elements of its governance from a broader and more detailed perspective. The paper is limited to internal (development) projects of project-supported and project-based organisations. We also limit our investigation to structural GoP elements rather than (operative) activities per se that admittedly also would be a viable perspective in organisational value generation. Our empirical investigation is further delimited by the search for regularities and causal relationships, we do not search here for unobservable mechanisms, nor for underlying forces (Schwandt, 2007).

The remainder of the paper is structured as follows: Chapter 2 presents and analyses the primary concepts and theories used for exploring value generation and GoP. Chapter 3 summarises the research approach and the case study methodology that were employed for the empirical work whose findings are summarised in Chapter 4. Chapter 5 discusses these findings in relation to extant literature, reflects on the main limitations that come with the research approach chosen and proposes some areas for further research. Finally, Chapter 6 presents the overall conclusions of our investigation of the research question.

2. Theoretical background

2.1. On value

Traditionally, value generated by a project has been assessed in financial terms. However, new studies of value have moved beyond these metrics to include process elements and nonfinancial effects, including intra-organisational features (e.g. Ahmed and Yannou (2003) and Pitelis (2009) for organisational studies; Laursen and Svejvig (2016) and Martinsuo and Killen (2014) for project studies).

Expanding the concept proves particularly useful when assessing value through the whole life cycle of projects and beyond (Andersen, 2008; Thiry and Deguire, 2007; Young et al., 2012), as then it can both be theorised and measured in terms

that are uniquely relevant to the organisation in question. Yet the expanded concept has also been criticised for making "value" too ambiguous a term (Pitelis, 2009), resulting in multiple meanings with regard to different organisational and individual purposes (Ang et al., 2016; Martinsuo and Killen, 2014; Winter et al., 2006). These alleged drawbacks are, in fact, advantages when examining value at the organisational and managerial levels. Consequently, and building on Pitelis (2009), we define value as "activities, products and services, engendered by projects and programmes, that are perceived as desirable by potential beneficiaries." What is perceived as desirable can be "value for money", or another attribute, including intrinsic value deemed advantageous to the organisation. Value is determined by the beneficiary, it can emerge over time, is context-dependent and has multiple facets, ranging from the technological, to the social, and the personal (Vargo et al., 2017). Accordingly, value is not created through isolated efforts of a firm or a customer but through combined actions and processes.

In economics and organisational research the terms "value creation" and "value capture" are used in a variety of ways to refer to different stages in the value process (Bowman and Ambrosini, 2000). For instance, based on a service-dominant logic (Vargo and Lusch, 2004) value generation in interorganisational projects has been seen as consisting of three parts, namely the production of project outputs, followed by a subjective assessment of outputs by stakeholders and a decision on their usage, and finally the capture of value (Laursen, 2018, p. 67). This view does not include the initiation of projects and the framework is centred on only the single project.

In this paper we use the traditional life cycle approach for our point of departure, but we expand it with a value harvesting stage (Riis, 2013 building on Thiry and Deguire, 2007). We propose the following three main stages of value generation:

- 1. Identifying value (project and programme definition and initiation)
- 2. Creating value (project and programme implementation)
- 3. Harvesting value (ensuring that the base/receiving organisation incorporates the project products and that the products are utilised).

If projects and programmes are to contribute value to an organisation it is likely that most value will be added after their completion. Therefore, the whole life cycle of a project, as well as the time after its completion, must be considered when assessing value (Andersen, 2008).

Finally, while three stages of the value process suggests linearity, in reality the process might be circuitous, with the steps occurring in various sequences (Grönroos, 2011). Nonetheless, at every stage value should be understood as something deemed desirable from the organisational perspective.

2.2. Links and domains

2.2.1. Projects and the permanent organisation

The primary interest of this paper is in organisational structures, processes and approaches that exist within the setting

of a project-supported or project-based organisation, and its purpose is to analyse how these interact with multiple temporary organisations to generate value (Andersen, 2008; Arvidsson, 2009; Lundin et al., 2015). We argue that organisational links, rather than organisational structure in the conventional sense, are critical for generating value. Therefore, we rely on the literature on organisational domains and links (Padgett and Powell, 2003, 2012), as shall be explained below. Projects are seen as embedded in the permanent organisation, with multiple couplings to their organisational context (Engwall, 2003; Sydow et al., 2004).

The understanding of how projects contribute to the permanent organisation draws on an exploration of how projects relate to their respective organisational context (Sahlin-Andersson and Söderholm, 2002). Most of the recent research on temporary organisations and their organisational context has been centred on project-based organisations. It has focused on sustaining knowledge and capabilities (Bakker, 2010; Prado and Sapsed, 2016) and managing uncertainty and collaboration (Jones and Lichtenstein, 2008). However, Bakker et al. (2016) state that these relations are not yet fully understood.

2.2.2. Three research perspectives on relating projects to a permanent organisation

One strand of research has concerned itself with the relations between projects and the permanent organisations themselves. Sahlin-Andersson and Söderholm (2002) called this the "detachment or attachment" dilemma of projects to the permanent organisation, where projects are coupled to the permanent organisation on many levels and with a variety of dimensions (Blindenbach-Driessen and van den Ende, 2006; Grabher, 2004; Sydow et al., 2004). The discussion has revolved around tensions, boundary roles and work (Arvidsson, 2009; Burke and Morley, 2016; Stjerne and Svejenova, 2016), as well as on the influences originating in the organisational context of single projects (Blindenbach-Driessen and van den Ende, 2006).

Another perspective has focused on the transition between the temporary and the permanent organisation. Jacobsson et al. (2013) have shown that the two spheres should not be seen as entirely distinct from one another. Yet, there is still a need for improved understanding of links, especially where the unit of analysis is the organisation as a whole and not simply a single temporary organisation (Burke and Morley, 2016).

A third strand of research concerns the features of integration and co-ordination, with mechanisms and links/linkages at the forefront of the investigations. Integration in organisations has been defined as "the process of achieving unity of effort among the various subsystems in the accomplishment of the organisation's task" (Lawrence and Lorsch, 1967). In a project and programme context, Turkulainen et al. (2015) adhere to this classical definition: for them, an organisation is an information processing system in which integration is an implementation mechanism. Interpreting integration as a process has proven particularly fruitful. To this concept, Child (2005) added the consideration of value creation through integration: "Integration signifies coordination, cohesion, and synergy between different roles or units in an organisation whose activities are different but interdependent in the process of creating value."

While integration and co-ordination are often treated as synonyms, co-ordination has sometimes been interpreted as referring to mechanisms that bring about integration (Katz and Kahn, 1978; Martinez and Jarillo, 1989). Dealing more specifically with project management, "coordination is primarily a matter of achieving some kind of joint effort or operation through the association of a number of people/actors for mutual benefit" (Söderlund, 2011). Furthermore, from the practical standpoint of contingency theory, co-ordination can be achieved by standardisation, by plan, or by mutual adjustments (Thompson, 1967).

Integration mechanisms include component parts and their respective activities and interactions (Pajunen, 2008). Mechanisms "produce" something: "mechanisms are entities and activities organised such that they are productive of regular changes from start or set up to finish or termination conditions" (Machamer et al., 2000, p. 3). For integration in organisations, structural and formal integration mechanisms include departmentalisation, centralisation or decentralisation, formalisation and standardisation, output and behavioural control (Liinamaa, 2012 based on Martinez and Jarillo, 1989).

2.2.3. Links and linking

Although the concepts of integration, co-ordination and mechanisms include many aspects that are relevant to GoP, their focus is on processes, actions and units. For exploring GoP, a broader view is needed that fully includes the dynamics of relating projects with a permanent organisation over time. For this we will use the concept of "links". A link is "a connecting part, whether in a material or immaterial sense; a thing (occasionally a person) serving to establish or maintain a connection; a member of a series or succession; a means of connexion or communication" (OED online, 2018). In the literature the terms "linkages" and "links" are often used interchangeably. However "linkage" is more accurately "the condition or manner of being linked; a system of links, the process of linking or connecting" (OED online, 2018). Linkage implies the action of linking or the state of being linked, and this distinction could appear to exclude connections that change over time; therefore, "link" is preferred for the present research. Links, with regards to projects and the permanent organisation, can be any kind of formal roles, interactions between persons and teams, documents such as guidelines, policies, workflows, and organisational units such as a project management office (PMO) (Andersen, 2006; Contractor et al., 2006).

Building on Galbraith (1973), Roberts (2004) and Thompson (1967) links can be grouped according to "Organising, Individual and HRM" links:

- 1. Organising links: structure (organising design, roles and documentation) or process (formal or informal meetings, dialogues etc.)
- 2. Individual links: approach (the project perspective, role perceptions and priorities that individuals possess or adopt) or behaviour

3. HRM links: structure (career path and competence development) or process (on-the-job-training, consultancy to projects and programmes, manning the project etc.).

In light of these distinctions and incorporating them into the theoretical context of temporary organisations, we will define a link as "a material or immaterial part or person that connects the projects or temporary organisation with its permanent organisation."

2.2.4. Domains

GoP concerns multiple levels in the organisation and a variety of organisational areas. These are often investigated separately in project management and organisational studies (Morris, 2011; Padgett and Powell, 2012). Yet a bridging of levels and areas can be accomplished with the concept of "domains," which in keeping with general usage are spheres of "thought or action" (OED online, 2018). Domains can designate organisations or a part thereof, including processes, areas of knowledge, practices, approaches, systems of tools, or methods of organising. In the literature, investigations of "domains" are often accompanied by a research focus on content, e.g. project management process domains (Anderson and Merna, 2003), elements of project management practices (Cooke-Davies and Arzymanow, 2003), or on systems dealing with products, processes, organising people, tools and goals in product development (Danilovic and Sandkull, 2005). To be able to span multiple levels and areas, we have adopted the perspective of multiple organisational domains.

In order to study several domains and the interfaces or relations between them we turn to Padgett and Powell (2003, 2012) and their seminal works on the emergence of organisations. They found new organisational forms on the basis of multiple domains, and the ties, or links, existing both within and between these domains. As such, links between domains can be the building blocks of formal organisations. They can be

relational and transactional and can incorporate people with a variety of roles in the different domains in which they are active. It is the ties or links both between, and within, the domains that bring about change, which in turn can shape the evolution of the organisation, and thereby affect organisational practices and policies.

A multi-domain perspective inspired by Padgett and Powell (2003) was used by Brusoni and Prencipe (2006). For exploring how core organisational elements came into being in the case of an Italian tyre manufacturing company they defined three domains of (i) knowledge, (ii) organisation and (iii) technology (production). We find their approach to be particularly relevant for GoP research and have adopted, and slightly reconfigured, it for our current purposes. The knowledge domain is the locus of the know-how of the GoP elements, while daily operations exist in the organisational domain, and the project's life cycle, from inception to value harvesting, is situated in the value generation domain.

These three domains are partially overlapping, and it is analytically difficult to separate them from one another. Separating the knowledge domain from the organisational domain is particularly challenging regarding, for example, people's approaches and practices. Therefore the knowledge domain – including its GoP elements and the links between them – will be considered as of the organisational domain. The value domain, where the management of projects and programmes are situated, covers the entire value process. Our approach is illustrated in Fig. 1, which shows the interplay between GoP in the organisational domain and the projects in the value domain.

2.3. Elements of Governance of Projects

Research into GoP elements appears to have evolved through a process of "patching" (Siggelkow, 2002) of discrete elements: from a consideration of isolated projects, to portfolios



Fig. 1. Theoretical framework of GoP, linking the organisational and value domains.

of projects, and then to the organisational level in its entirety. Empirical investigations have typically looked at the project from its initiation to completion, but not beyond this stage, and value harvesting beyond project completion is rarely considered. Furthermore, no empirical studies of GoP covering the entire project lifespan were found. Only a few studies, based mainly on best-practice rather than research, have attempted to identify elements of GoP empirically (e.g. Badewi, 2016; Too and Weaver, 2014). The majority of studies of GoP deal with underlying perspectives, context variables, dimensions and enablers of GoP (Müller et al., 2014, 2016a; R. Müller, 2011; Müller and Lecoeuvre, 2014), but postpone for future research the defining characteristics of GoP elements.

For gaining an overview of the main elements of GoP that have been the subject of past research we carried out an extensive literature review. A list of the main GoP concepts, including key words and search terms, was assembled on the basis of a sample of key articles (including Aubry et al. (2007); Morris and Geraldi (2011); Müller 2011). Both backward searches (reviewing the citations for the articles) and forward searches (identifying articles citing key articles) in bibliographic databases, e.g. SCOPUS and Business Source Complete, were carried out (Webster and Watson, 2002).

The literature search began with elements of GoP that were based on research with a top-down view from the organisational level of single projects. The literature on GoP elements emphasized the project's progression from initiation to completion (Naravanan and DeFillippi, 2012; Too and Weaver, 2014). Next, we searched for work that was concerned with the integration of all aspects of project management at the organisational level (Aubry et al., 2007, 2012; Hobbs et al., 2008; Müller, 2009; Müller et al., 2014, 2016b; R. Müller, 2011). Then, we searched for work about value and integration between projects and line management (Thiry and Deguire, 2007). Elements related to the institutional context for approaches to processes, methods, instruments, attitudes, and behaviour were identified in the work of Eskerod and Riis (2009b), Müller (2009) and Müller et al. (2014). Finally, the Organisational Perspective on projects was reviewed (Andersen, 2008, 2012, 2014a).

Eleven elements resulted from this review and they are summarised in Table 1, with their corresponding references.

Table 1

Elements of GoP identified in the literature.

Governance of Projects elements	Definition according to their key authors	Key references
Project generation – project and programme generation, alignment with strategy	How the ideas for projects are screened, aligned with strategy, and how projects and programmes are proposed and initiated.	Aubry et al. (2007) Gemünden et al. (2018) Müller 2011 Narayanan and DeFillippi (2012) Thiry and Deguire (2007) Too and Weaver (2014)
Project Portfolio Management (PPM)	Selection and prioritization of projects and programmes that contribute value to the organisation: how portfolio resources are allocated.	Gemünden et al. (2018) Too and Weaver (2014)
PMOs	Organisational unit of progress control of, and management support for, projects and programmes.	Aubry et al. (2012) Artto et al. (2011) Eskerod and Riis (2009a) Hobbs et al. (2008) Müller (2009, 2011) Too & Weaver, (2014)
Project and programme management (PM and PgM)	The practices of programme and project managers.	Gemünden et al. (2018) Too and Weaver (2014)
Project owner role	Responsible for liaising between the project and the parent organisation, both governing and supporting.	Andersen (2012) Hielmbrekke et al. (2014)
Project management model (PM model)	Specifies the management breakdown structure, the management processes, and the roles in project management	Eskerod and Riis (2009a, 2009b)
Knowledge sharing between projects	Sharing of information, ideas and experience between projects and project managers.	Gemünden et al. (2018) Müller (2009) Narayanan and DeFillippi (2012)
Ensuring the permanent organisation/receiving organisation incorporates the project products	The deliverables from projects are incorporated in the receiving organisation and utilised.	Andersen (1996, 2008, 2014) Artto et al. (2016)
Monitoring of value	Monitoring and follow-up of value creation and harvesting.	Andersen (2008) Thiry and Deguire (2007)
Approaches	Approaches to processes, methods, instruments by individuals, along with the attitudes and behaviours of the individuals in the organisation.	Eskerod and Riis (2009b) Müller (2009) Müller et al. (2016)
Human Resource Management (HRM), developing and maintaining enterprise PM and PgM capabilities	Selection, performance appraisal, and career development of people in project organising roles.	Aubry et al. (2012) Gemünden et al. (2018) Narayanan and DeFillippi (2012)

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2.4. Governance of Projects and links

The links between projects and their permanent organisation are of prime interest to GoP research. Consequently, a more in-depth literature review was carried out covering each of the elements listed in Table 1 and aimed at identifying, firstly, how the elements link projects and the parent organisation and, secondly, how they are linked to other GoP elements.

The findings of the review are summarised in Table 2. They suggest that the elements have mostly been examined in isolation. Links between the elements are identified in a cursory manner, if at all.

Tables 1 and 2 show that research has mainly focused on the value identification and creation stages. It is preoccupied, for instance, with the links between business strategies and projects, and this is clearly oriented towards the value creation stage. There seems to exist a conviction that if strategies and projects are aligned, then the intended value will be harvested, thereby generating value and supporting strategy. This has been called the "define-and-run" paradigm (Maniak et al., 2014). In this regard, our contribution is explicitly including the value harvesting period in our study.

Moreover, research has yielded relatively few insights regarding the nature of the links and the GoP elements. We will help to close this gap by demonstrating empirically how GoP generates value in organisations.

3. Method

3.1. Case study approach

A case study approach was selected for teasing out the GoP features most important for generating value. To increase the robustness of the study results, multiple case studies were carried out (Herriott and Firestone, 1983). With a focus on structural, interpersonal and technological links, we examined how value was generated via GoP in four case companies in 2015 and 2016. In keeping with the post-positivist paradigm, the aim was to analyse and explicate the data, which could be systematically examined for plausibility. The case study work was based on a theoretical framework, to avoid "being overwhelmed by data and being drawn into narrative at the expense of theory-building" (Gomm et al., 2000 in Hartley, 2004).

In the case studies our main interest was in the value generated by GoP – or more specifically, in the outcome of the actors' relations, albeit not in the actors themselves, the way they influence each other, nor the different stages of actor network processes (Latour, 2005). As the aim was to study GoP at a specific point in time, no historical analysis of GoP development in the case study companies was attempted.

Our approach required gaining a full understanding of both empirical GoP phenomena and their real-life contexts (Cavaye, 1996). Consequently, the research has assigned the same weight to language and logic in the documentary and interview data. We interviewed the main actors and consulted documents such as the PM models of the case study companies, as well as their project management guidelines, management presentations, and training videos. Both interviews and formal texts have been considered as representative of reality. However, while observable social reality (Remenyi et al., 2002) was the main interest of the research, the worldview of the actors in the various parts of the systems was also included. In this way, the context of training programmes, models, and individual project managers' perspectives in which projects are embedded have likewise informed the research.

3.2. Case study organisations

The case study organisations were selected from a population of large private companies with a significant volume of internal projects. The sampling of case companies was theoretical, not random or stratified, and we adopted a replicating logic, which isto say that we selected the organisations because they were thought likely to replicate or extend the emergent theory (Eisenhardt, 1989; Glaser and Strauss, 1997). Case companies had to be organisationally mature, carrying out a substantial number of projects each year, had to have invested in project, programme and portfolio management over the last decade, andhad to have a project management function referring to theirsenior management. Organisations of differing sizes were selected, along with those carrying out different types of projects, including operational development, IT and engineering/ construction.

Key data on the case companies are presented in Table 3.

The case companies included both the archetypes of projectsupported and project-based organisations (Lundin et al., 2015), chosen by us to accentuate similarities and differences. This is in keeping with recent empirical GoP research that has not distinguished between project-supported and project-based organisations. Similarly, the literature review conducted for this study did not indicate a need for choosing between the archetypes in order to answer our research questions.

3.3. Data collection

When collecting data, the operational units of the case companies were preferred over units dealing with new product development. This ensured that the GoP phenomena remained at the centre of the study (Stake, 1995).

Over periods of up to two months per case company, we conducted a total of 34 semi-structured interviews with highly knowledgeable employees:

- Case A: 9 interviews (3 Head of PMO & PMO staff, 1 Project owner, 3 Project managers, 1 HRM manager and 1 Senior manager; average tenure of 12 years)
- Case B: 8 interviews (2 Head of PMO & PMO staff, 1 Project owner, 5 Project managers; average tenure of 19 years)
- Case C: 8 interviews (1 Head of PMO, 1 Project owner, 2 project managers, 1 HRM manager and 3 Senior managers; average tenure of 9 years)

E. Riis et al. / International Journal of Project Management xx (2019) xxx

Table 2

Links between projects and the permanent organisation identified in the literature for each of the GoP elements.

GoP Element	Links between projects and the permanent organisation identified	Key references	
Project generation and strategy alignment	Projects and permanent organisation are linked through business processes and not simply through project management processes.	Morris and Jamieson (2005)	
C	Successful organisations foster links between the strategy process and reviews of the project portfolio, typically a formal review process.	Dietrich and Lehtonen (2005)	
	Tools: top-down cascading tools, portfolio views, stakeholder maps and Mission Breakdown Structure.	R. Müller et al. (2008) Andersen (2014) Loch and Kavadias (2011)	
PPM	Projects shaping strategy: focus on small projects, iterations and parallel trials. Project managers should be concerned with parent organisation interests beyond the single projects.	Martinsuo and Lehtonen (2007)	
	Project mandates or business cases are considered a type of link to the permanent organisation.		
	Sharing of project portfolio decisions between groups of line managers whose roles exist before and during project execution.	Müller et al. (2008) Blomquist and Müller (2006a)	
	Links between projects and the parent organisation are structural and centred on senior management. Links are put in place by senior management, who make fundamental decisions,	Unger et al. (2012b) Unger et al. (2012a)	
	such as selecting and aborting projects, while line managers release resources. Stresses the importance of the interplay between the projects and the parent organisation (relationship seen from the single project point of view)	Martinsuo (2013)	
PMOs	PMO mainly links single projects and project managers: (i) monitoring and controlling project performance; (ii) developing project management competencies and methodologies; (iii) multi-project management; (iv) strategic management; and (v) organisational learning. Links pertain to responsibility for projects and a supporting role for project	Hobbs and Aubry (2007) Müller et al. (2013)	
	managers. Links emphasise identifying and quantifying benefits early on in the projects and reviewing changes and benefits at their end.	Ward and Daniel (2013)	
	Project portfolio management offices (PPMO) links through formal process of support and project managers receive support from the PPMO.	Unger et al. (2012a)	
Project owners' role	Project owner (an individual) is a crucial link between a project and the parent program of the parent of the pare	Andersen (2008, 2012) Crawford et al. (2008)	
PM models	Models link management processes, governance structure and roles in project management.	Eskerod and Riis (2009a, 2009b) Garel (2013)	
Project management	The links in project-based organisations include a liaison figure for integrating value identification and creation stages, cross-functional teams, and meetings at management level.	Turkulainen et al. (2013)	
Programme management	The links comprise management reporting systems, common PM model, knowledge sharing between projects, rotation of staff between projects and parent organisation, and an organisational unit managing technology and functioning as a knowledge centre.	Turkulainen et al. (2015)	
Knowledge sharing between projects	Links support sharing of knowledge by maintaining a database of lessons learned, arranging meetings and workshops across projects, and sharing support and advice between the project managers.	ons learned, Pemsel and Wiewiora t and advice (2013)	
Monitoring of value – follow-up on value creation and harvesting	Management involvement interdependent with PM model and PPM. Benefit reviews influence such approaches. Links during project execution are established to maximise value.	Doherty et al. (2012) Artto et al. (2016)	
Ensuring the permanent organisation incorporates the project products	Links integrate the work of project teams and future users in parent organisation. Synchronization of the processes between the projects and the permanent organisation	Andersen (2008) Doherty et al. (2012) Ancona and Chong (1996)	
Approaches and behaviour	Links concern the approaches to (understanding and application of, alignment with) processes, methods, instruments, attitudes and behaviour. Approach of the actors in projects, i.e. their perspective on the projects, whether narrow (project focus) or holistic (both project and parent organisation focus), is decisive.	Miller and Lecoeuvre (2014) Müller (2009) Eskerod and Riis (2009b) Martinsuo and Lehtonen (2007)	
HRM	As a link, HRM acts as a knowledge broker (especially with competence development), assists trust-building in project teams, identifies opportunities for change, and assists in implementing change initiatives. Also relevant are transformational HRM practices such as change management and organisational development processes.	Bredin and Söderlund (2006) Lepak et al. (2005)	

Table 3 Profile of the case companies

Case	Type of company	Unit of analysis	Approximate number of employees	Number of PMOs	Approximate number of projects annually
Α	Project- supported, pharmaceuticals & biotechnology	Operations	10,000	15	300
В	Project- supported, personal & household goods	Operations	10,000	12	300
С	Project-based, consultancy - economics and engineering activities	Group IT	110	1	40
D	Project-based, energy plants - lifecycle solutions	Operations	200	1	12

• Case D: 9 interviews (2 Head of PMO & PMO staff, 1 Project owner, 3 Project managers, 1 HRM manager and 2 Senior managers; average tenure of 20 years).

All interviewees were found to be highly motivated to participate in the interviews; they perceived GoP as critical for their organisation, and as per Huber and Power (1985) and Miller et al. (1997) we contend that this improved the accuracy and reliability of their answers.

To eliminate ambiguity, all concepts and attributes used in the interviews had been defined according to the literature review and were then compared to the interviewees' own perceptions. In this way, we avoided bias of judgement, as well as inconsistent terminology. Open-ended questions were posed in the interviews to enhance accuracy and limit the bias of retrospective recall (Miller et al., 1997). Among others, questions were posed about the interviewees' perception of their main role, how they ensured value was generated, and how PPM functioned in their organisation.

Interview transcripts and internal documents (such as guidelines and training material, internal management presentation material, and internal videos) were coded using a scheme developed alongside the theoretical framework. Transcripts and documents were read for content and context and were analysed using the MAXQDA software programme.

Links between GoP elements were logged with NodeXL, a Network Analysis programme. Network analysis was chosen as a suitable method for exploring a specific framework like GoP, as it is concerned with the position of nodes (or actors) and their structural positions in a network. Links were measured across the units of analysis in two steps: first, guidelines and official documents were assessed and all links from projects to the parent organisation were coded, assessing the focus of the links to be either the projects or the parent organisation; second, qualitative assessments provided by the interviewees were coded according to their links and focus.

Boundaries between various GoP elements were set by the formal criteria of structure, roles, and documentation originating from the case companies (Riis, 2015). This "nominalist approach," which sees networks as models rather than "things out there" (Borgatti and Halgin, 2011), was chosen to ensure consistency and aid comparison of the cases, rather than having the respondents themselves define the boundaries. Adjacency matrices were carried out case-by-case and they were compiled undirected, i.e. independent of the link pointing in one direction or the other. The data were then imported into the analysis framework and grouped according to the types of links.

4. Findings

4.1. Organisational domain

4.1.1. Structural features and network analysis

All GoP elements surveyed in the literature review were present in all case companies, but not all of them were in practical use. Programme management was not used in any of the cases, although preparations for using programme management were on-going in cases B and C.

Differences between the case companies emerged with regard to the number of actually networked elements as a proportion of the number of total possible links. As constructing an absolute assessment scale is not possible we use Scott's concept of network density as a comparative yardstick for bringing out the differences (Scott, 2012). Densities can be more or less "central," expressing the extent to which GoP elements are linked to other GoP elements (Alhajj and Rokne, 2014). Comparing densities proved instructive: links between the GoP elements in the networks of cases A, B and C appear similarly close-knit (more than 40% of possible links were realised), while those in case D are only very loosely connected. One explanation for this is that the unit of analysis in case D carries out only external projects and PMO tasks are anchored with a line manager, while the PPM tasks reside with the executive board and, unsurprisingly, results in fewer links between elements.

Data about the four case company networks are summarised in Table 4.

The most "central elements" are identical in companies A and B. They include PPM, PMOs, PM and PgM, PM model and Project generation. Furthermore, the first five of these elements are also the most central in case C. Project generation is a common central element in all cases, as confirmed in interviews with both project managers and line managers, for whom the correct definition of projects was that of a current focus and an area needing further improvement.

Concerning the strength of links, no clear pattern across all the cases was apparent.

4.1.2. Project owner

The role of project owner was well established and understood in all case companies. Daily or weekly exchanges

E. Riis et al. / International Journal of Project Management xx (2019) xxx

Feature	Case A	Case B	Case C	Case D
Density (percentage of possible links realised)	48%	41%	42%	27%
		The second	And the second sec	
Most central GoP elements (number of unique links to/ from a GoP element) Common central elements in bold	 PPM PMOs PM & PgM PO role PM model Project generation 	 4. PPM 5. PM & PgM 6. PM Model 7. Project generation 8. PMOs 9. PO role 	 PPM PM & PgM Project generation PMOs PM model HRM 	 Approaches and behaviour PM Model PM & PgM Knowledge sharing Project generation Monitoring of
Strength of links (number of different links between two GoP elements) – the three pairs of elements with most links between them	 PM & PgM – HRM Approaches and behaviour – Monitoring of value HRM – PPM 	 PM & PgM – Ensuring incorp. of project result PMOs – Knowledge sharing PPM – Project generation 	 PPM – Project generation PM & PgM – Ensuring incorp. of project result PMOs – Knowledge sharing 	 Value Approaches and behaviour – Monitoring of value PM & PgM – Project generation Project owner role – PM & PgM

Table 4				
Structural	features	of the	GoP	networks

between project owners and project managers are the rule, but no formal procedures or policies on this were found. Project owners are members of the project portfolio committees that decide on which new projects to implement. Simultaneously, they are often line managers who will receive the project result, or a part of it, in global projects. As such, they form a link between the projects and the parent organisation throughout the value process.

4.1.3. PMOs

PMOs of cases A, B and C had existed for a minimum of five years. Their tasks encompass both project and portfolio management. Consequently, they are placed close to the top management of the companies. PPM's are carried out through a decentralised setup integrated in the parent organisation. The central PMO has full-time staff, but the decentralised PPM offices are manned with part-time parent organisation managers and staff. The position of head of a central PMO is often part of a parent organisation career. In case D, the functions of a PMO are assigned to a line manager.

A more detailed examination of structural links shows that in cases A,B and C the tasks of PMOs cover the whole value process and all five task categories, namely managing practices, providing administrative support, monitoring and controlling projects, training and consulting, and evaluating, analysing and choosing projects (as defined by Artto et al. (2011)). In case D the first four of the five task categories were covered by the PMO function.

PMO roles in cases A and B allow them to take managerial actions in the formulation of projects regarding strategy and scope. In case C, the PMO executes projects once the PPM board has initiated it. In case D, the main function of the PMO is supporting the PMs, bringing the project owner perspective into decision-making and monitoring and controlling projects.

PMOs report to the second level of management and in cases A, B and C Heads of PMOs are recruited from a senior line management job. In case D, some of the tasks of a PMO are anchored with a line manager. Consequently, the PMOs are seen as belonging to the management sphere, they participate in strategic decisions, and were specifically set up to generate value from projects for the permanent organisation and integrate functions of project and programme management with project portfolio management.

4.2. Value domain

4.2.1. Value identification

When screening/ranking ideas and establishing projects, all four case companies involve the parent organisation through

9

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local PPM committees and/or the central board and, in case D, the Board of Directors. In cases C and D, project managers are actively involved in identifying value in order to facilitate cross-project learning.

Decentralised decision-making (as part of line management's PPM review) regarding project initiation is often seen as helping to generate value. This extends to the PMOs' role in "challenging" projects on scope, timing, and duration. PMO contributions may also include the ranking of projects. In none of the four cases is ranking carried out by formalized criteria or algorithms; in cases A, B and C it is a result of a negotiation process involving the business units of the organisation.

Project value in cases A, B and C is judged mainly by indicators such as operational savings, increased capacity, lead-time reductions, or flexibility, as well as non-financial metrics such as number of users after implementation and employee satisfaction. In case D, the indicators are mainly those of budget, quality and efficiency.

4.2.2. Value creation

According to respondents, a transparent ranking of projects, negotiated between all business units, enables a fast adaptation to the availability of resources: "All the departments know exactly which projects they should allocate resources to, and we have made a prioritization based on resources and based on the funding that we need" (Project owner, case A).

A preoccupation of project owners and project managers across all cases is that of involving future users and the relevant line managers in projects. Such arrangements ensure that the projects' results are well embedded within the parent organisations. The transition from project to parent organisation should be smooth and there should be no delay in harvesting value. As part of the transition in case A, the line manager who takes over the results of the project reports at status meetings on that project during the last period.

In case B, the PMO charges the parent organisation with the responsibility for exchanging knowledge on how to use project results with the help of a knowledge-sharing forum on the company's intranet. PMs in case B communicate the purpose of the project to ensure contributions and support for the project from staff that are often distant from the part of the parent organisation that will benefit from the project results. The technical or financial benefits, or Key Performance Indicators (KPIs), do not, in the PMs' experience, tend to garner support for projects across business units.

In case C, the handing over of project results to the parent organisation takes place with project resources still allocated, so that "the parent organisation can get up in gear" (PM, case C).

Handing over to the customer in case D is characterized by a belief that "We always have the customer in the highest focus... we want a satisfied customer" (Head of PMO function, case D).

4.2.3. Value harvesting

In all cases the end of the value creation stage is characterized by a formal process – typically a handing over

of the project result to the parent organisation represented by the person appointed as responsible for value harvesting, and includes a handing-over document.

When asked to describe the main ways in which value is generated in their permanent organisation, respondents from each case company highlighted the following:

- A. The PM model includes the end-state and the project owner sees the long-term value, not only current business targets.
- B. Project managers concentrate on the entire value process and communicate the project mission to the parent organisation, thereby ensuring that the value to be harvested is clear to the parent organisation and a person responsible for harvesting value is part of the PM model.
- C. Carrying out early tests of project results in the parent organisation, the project manager works out precisely how the value can be monitored afterwards and works on anchoring the project in the parent organisation; an appointed senior line manager is responsible for securing value throughout the value process; and line managers plan for the end-state well in advance.
- D. Senior management roles facing clients span the whole value process; project generation and project definition include arrangements for sharing any additionallygenerated value with the client; contractual responsibility extends to the operation after project completion.

Across all four case companies, ensuring the incorporation of project results is a vital part of the project owner's role. However, after 6–12 months this value is rarely monitored; instead, it becomes part of the normal line management reporting.

To summarise, a focus on the value harvesting stage for project owners and project managers in three of the four cases leads to the involvement of future users and relevant line managers in the projects. On value harvesting, all four agreed that there is room for improvement.

4.3. Links between domains

Overall, the types of links for generating value (summarised in Table 5) are similar in cases A and C, and again in cases B and D. In A and C, the majority of the links described were structural, and of these almost all were role links, with only a few process or role perception links. However, in cases B and D the majority of links were process or role perception links. One explanation for this might be the strictly regulated environments of case companies A and C, with requirements for documenting processes that partly dictate their internal governance.

The links identified in cases A and B are mainly directed at the harvesting of value; in cases C and D they are mainly directed at creating value. The interview responses further substantiate the "archetypes of their organisation" pattern (Lundin et al., 2015): the project-supported organisations have most project harvesting links, whereas the project-based organisations have the most project creating links.

Table	5
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Links identified between the organisational and value do	nains.
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Links	Case A	Case B	Case C	Case D
Links identified in the inter	views			
Links identified between projects and parent organisation	Organising links: 13	Organising links: 10	Organising links: 13	Organising links: 10
	22. Structural: 11	24. Structural: 4	26. Structural: 10	28. Structural: 3
	23. Process: 2Individual links (role perceptions): 1	25. Process: 6Individual links (role perceptions): 4	27. Process: 3Individual links (role perceptions): 5	29. Process: 7Individual links (role perceptions): 8
Focus of links emphasized by interviewees	Value creation: 2	Value creation: 6	Value identification: 2	Value identification: 1
	Value harvesting: 12	Value harvesting: 8	Value creation: 18	Value creation: 16
			Value harvesting: 14	Value harvesting: 3
Links identified in guideling	es and role descriptions			
Links between projects and parent organisation	34	41	23	9
Role descriptions	Project org. 30%	Project org. 67%	Project org. 33%	Project org. 50%
distribution *)	Parent org. (incl. GoP) 70%	Parent org. (incl. GoP) 33%	Parent org. (incl. GoP) 67%	Parent org. (incl. GoP) 50%
Focus of links **)	Value identification: 15	Value identification: 8	Value identification: 9	Value identification: 1
	Value creation: 10	Value creation: 8	Value creation: 13	Value creation: 9
	Value harvesting: 9	Value harvesting: 25	Value harvesting: 14	Value harvesting: 1

* Projects: the single project organisation with a steering committee, project manager, project team etc. Parent organisation: parent organisation roles about projects, programmes, and portfolios incl. GoP unit.

** Links can have one or several foci.

Links between the domains are, at least in terms of frequency, similar across all four cases. The distribution of types of link is primarily determined by the type of projects and not by the organisation archetype. Across the cases there is the same attention paid to the transition from projects to organisation. However, the kinds of links pertinent to the value process, as they appear in interviews and documentation, are not consistent and this is mainly due to the varying responsibilities of roles. Most, but not all, of the links remain stable during the value process.

5. Discussion

5.1. Elements of Governance of Projects and the links between them

All eleven GoP elements extracted from the literature (see Table 1) were observed in the case companies. In line with the view of governance proposed in Beatty and Zajac (1994) and Davis and Useem (2002), these include structural elements such as organisational units and roles, and personal and interpersonal elements such as attitudes and behaviour. Nonetheless these elements can hardly be considered a definitive list. Moreover, our study has shown that when it comes to how organisations govern their projects to generate value, it is not the elements that exist at any given moment in a company that matter most, but rather how the elements are implemented vis-à-vis GoP, as well as the nature of the links that exist between them.

In the case organisations a number of GoP elements showed high interdependency with other core organisational elements. Across the case companies there were five such "core organisational elements" (Siggelkow, 2002): the PMOs, PPM, the PM model, project management, and project generation. The five appear in the two project-supported organisations, A and B, which are manufacturing companies but operate in different sectors and environments. They also appear in the project-based organisation C, where the analysis was restricted to the business support function. Case company D, a project-based organisation, only has three core elements in common with the other companies.

Our study extends previous work that focussed on individual elements of GoP and their connections to other parts of the organisation (Artto et al., 2011; Aubry et al., 2007; Killen, 2013). Blomquist and Müller (2006b) and Killen (2013) found the core element of PPM to be closely connected to managers in the permanent organisation, both in the value identification and creation stages. More specifically, Edkins et al. (2013) demonstrated the importance of linking project generation to project owners and project management. In our cases A, B and C the roles of the central PMOs go beyond the role descriptions found in the literature (Aubry et al., 2010; Hobbs and Aubry, 2010), as does the role of the PPMO model (Unger et al., 2012a).

Our findings add a new dimension to the existing literature, in which PMOs have been predominantly seen as units designed for efficient use of resources and effective project management outcomes relating to time, quality and cost targets (Müller et al., 2013). They provide a core structure where local PPM offices establish close links between projects, programmes and the parent organisation for the whole value process. This points to a need for broadening the traditional descriptive models of PMOs beyond the collection and dissemination of information about projects and support to

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project managers, which are typically at the centre of research attention (Too and Weaver, 2014).

5.2. Links between projects and their parent organisation

Our research presents a novel approach to exploring the links between projects and their relations to the permanent organisation. Following Burke and Morley (2016), our unit of analysis is the organisation rather than the single project.

Our findings also add other types of internal projects to the results of Gemünden et al. (2005), who state that when it comes to innovation in product development, projects and successful firms have very little organisational separation. These developments allow for a more comprehensive view of how value is generated by GoP.

A first observation is that GoP for project-supported and projectbased organisations should be seen as context-dependent. GoP is similar for the internal projects in both types of organisation. Among our case companies the project-based case D exhibited the same pattern of links between projects and the parent organisation as in case B, which is project-supported. Both case companies showed many of the characteristics of management and governance described in Lundin et al. (2015). GoP appears to be one of the basic features of both types of organisation.

This is in line with the typology of temporary organising proposed by Bakker et al. (2016), where the project-supported and the project-based organisation belong to the same archetype. A closer look at the institutional context of projects described in higher-level terms by Morris and Geraldi (2011) found a clear reciprocity between the permanent and temporary organisation and emphasized the importance of the links between all GoP elements. In particular, we found that project generation must be linked to several other GoP elements in order that value can be derived.

In our case companies the value process integrates projects into the permanent organisation with many and varied links. The prominence of transition was highlighted throughout the interviews. Temporary and permanent organisations do not appear as rigidly separated and the concept of transition from temporary to permanent organisation is a central topic for GoP. That transition should be at the centre of temporary organisations has been argued for by Jacobsson et al. (2013) and our empirical findings support this stance.

In our study we went beyond an exploration of just one domain and its environment, as is usual in the social sciences (Brusoni and Prencipe, 2006; Padgett and Powell, 2012). Using a multiple-domain approach in exploring the links within domains, and between them, we have established that it is not only formal roles and procedures, but also links between projects and the permanent organisation, that affect how value is generated. This confirms earlier work on organisational emergence by Padgett and Powell (2012), as well as work on the emergence of new connections within and across a company's domains by Brusoni & Prencipe (2005). Both groups of authors consider the links between domains to be critical for value generation and organisational development.

5.3. Value and value generation in the organisation

Harvesting value for the parent organisation is a dominant motive among senior managers, project managers and project owners in the case companies – yet value creation was similarly prominent in the project-based case company with only external projects. Our findings firstly support the governmentality dimension as a foremost concept or theme, to which governors refer in their governance tasks, identified by Müller et al. (2016). At the same time, we found that this theme was separated across value creation and value harvesting, and the two parts related to different links, processes and structures, and we therefore propose that it be split into two processes relating to value creation and value harvesting.

Another theme concerns how value generation is perceived by the management in the case companies. Our findings show that the case organisations used rich descriptions of the value to be harvested, and this supports previous research on project missions and outcomes (Andersen, 2014b; Couillard et al., 2009). The whole value process is in view for all roles active within GoP – both project and parent organisation managers, and the value process, as per Grönroos (2008), was seen as "circuitous".

Within all the case companies there existed a clear perception of the value generated and an equally clear distinction between value created as part of the project and value harvested by the parent organisation. This observation is pertinent for those hoping to reconstruct the theory of the temporary organisation, where such a distinction based on the locus of value generation has until now not been identified (Gustavsson and Hallin, 2015; Jacobsson et al., 2013; Lundin and Söderholm, 2013).

Concerning the dimensions of value, we found that two of our cases showed a further dimension of value than the four dimensions - project efficiency, impact on the customer, direct business and organisational success, and preparing for the future defined by Shenhar et al. (2001). Our findings demonstrate how in projects with important – especially external – stakeholders, or in projects requiring compliance with international regulations, stakeholder power is pivotal. This accords with research on implementing strategy through projects (e.g. Loch and Kavadias, 2011) and with mapping project stakeholders in organisations (Aaltonen and Kujala, 2016). Therefore, the present study indicates, that a value dimension on stakeholders should be added to the 4 dimensions by Shenhar et al. (2001).

The resulting framework is shown in Fig.2. Looking at the constituent elements of GoP our findings suggest, firstly, that to ensure value is generated the elements must be linked in the organisational domain. GoP generates value by ensuring that links exist between the projects, programmes and project portfolios and the permanent organisation in a way that spans the entire value process, from value identification, to value creation, and finally value harvesting. The elements of GoP must be linked to each other. In our case companies the most critical elements were the PMOs, PPM, the PM model, project management and project generation.

E. Riis et al. / International Journal of Project Management xx (2019) xxx



Fig. 2. Final framework of GoP.

The framework of GoP elements should be studied and understood holistically. As with Morris (2013), a holistic approach must be adopted in order to fully comprehend how value is generated. Researching and developing GoP elements in isolation from one another ought to be questioned.

5.4. Limitations and areas for further research

As a primarily empirical study, our findings face some limitations. The four case companies are large, profitable enterprises headquartered in Denmark and our observations might not be universally valid. Nonetheless, we believe the cases provide unique insights into the interplay of structures and functions of GoP and its role when value is harvested. We believe the interest of these novel insights outweigh their possible lack of general applicability.

The use of a theoretical framework built around the concepts of links and value, while allowing us to focus on the topic in hand, might also have left us vulnerable to bias and admittedly limits us to structural consideration rather than actions. We also acknowledge that when categorising the types of links, some real-world overlap and ambiguity have been suppressed, but we would argue that the conceptual clarity this affords for the purposes of analysis makes it worthwhile.

The ideas offered here open up new areas for research. One such area concerns the links between domains and their relations to the underlying perspectives on governance and which might, for instance, address the relationship between the projects and strategy of the organisation. Furthermore, GoP in project-supported and project-based organisations of different sizes and in other sectors and should be investigated and the results compared against those described here, for added depth and a wider perspective.

A third area for future research would be exploring the dynamic character of links that hold throughout the value process – when and where changes do occur, their nature, and their role in project pacing. This would help in gaining a full-fledged understanding of GoP and might also assist in developing and refining the methods used in GoP research.

A final, somewhat different area might be future research into the governance of open innovation projects – interorganisational projects – and the value generated for their organisations. This would enable the study of innovation activities, the actors, and their interactions as a whole, and contribute to a broader understanding of how value is generated in project networks.

6. Conclusion

A complex interplay of links is imperative if the parent organisation is to derive value from its projects. Organisations generate value from projects through their GoP by ensuring that links between the elements of GoP are in place and active. Five central elements of GoP have been identified as vital for successfully governing internal projects for value generation: PPM, PMOs, Project management, PM model, and Project generation. Not only is the network of links between the elements of GoP a driver of value generation, but so too are the links between the organisational and value domains.

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Organisations put in place links between the organisational and the value domains to ensure that value is identified, generated, and subsequently harvested. The types of links are context-dependent and vary between organisations. It is the existence of the links in the first place, the interplay between the temporary organisations and the permanent organisation, rather than what type of links these might be, that appears to matter most.

This study has provided further evidence that strong links between temporary organisations and their permanent organisation are vital if a parent organisation is to derive value from its projects. That these considerations extend beyond the project execution is also critical for maximising value. By connecting value generation, governance of projects and the links between the temporary and permanent organisation we contribute new perspectives to the literature on projects and their organisational context (Aubry et al., 2012; Morris et al., 2011; Söderlund and Müller, 2014; Winter et al., 2006). We further contribute to the literature on the relations between projects and the permanent organisation by exploring the multitude of links between them (Bakker et al., 2016; Jacobsson et al., 2013; Sahlin-Andersson and Söderholm, 2002).

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declarations of interest

None

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